

**REPORT/RECOMMENDATION TO THE BOARD OF SUPERVISORS  
OF SAN BERNARDINO COUNTY, CALIFORNIA  
AND RECORD OF ACTION**

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**May 13, 2003**

**FROM: G. DANIEL OJEDA, Director**  
Architecture & Engineering Department

**DAVE GIBSON, Director**  
Facilities Management Department

**SUBJECT: SAN BERNARDINO COUNTY MUSEUM HVAC SYSTEM REPLACEMENT –  
AWARD CONSTRUCTION CONTRACT AND AUTHORIZE FILING NOTICE OF  
COMPLETION**

**RECOMMENDATION:**

1. Award an \$840,000 construction contract to D. Burke Mechanical Corporation of Corona, for the San Bernardino County Museum HVAC System Replacement in Redlands, California; and
2. Authorize the Architecture and Engineering (A&E) Department to execute the Notice of Completion after acceptance of the work.

**BACKGROUND INFORMATION:** The San Bernardino County Museum (45,000 s.f.) built in 1974 is located at 2024 Orange Tree Lane in Redlands. In 1987, the Museum's HVAC system was replaced with an ice storage system, which provides chilled water to the air conditioning system to cool the entire facility. At the time the ice storage system was installed, the Museum's operational hours were from 8 a.m. – 5 p.m., Monday through Friday. This left approximately 10 – 12 hours in the evening to generate and store ice for the following day. Over the years, the Museum has changed its operational hours to include evenings and weekends. The existing ice storage system was not designed to operate with the Museum's extended hours and cannot meet present cooling demands.

In July 2001, Facilities Management hired Mathaudhu Engineering to review the existing HVAC systems of the San Bernardino County Museum and several other County Facilities in order to recommend changes and/or replacement of certain equipment in order to increase efficiency and reduce maintenance costs. At that time, Mathaudhu Engineering recommended further review of the Museum's existing HVAC system to identify possible deficiencies and to formulate a viable scope of work. On February 2, 2002, the Board awarded a contract to BP and Associates to investigate possible design alternatives and provide a set of construction documents, which reflected their findings. It was determined during the course of design that the original scope of work had to be expanded from evaluating and replacing the HVAC equipment to replacing the entire cold storage system as well as the possible replacement/reconfiguration of the air ducting system. In addition, it was thought that rezoning and air balancing of the entire system would be necessary. This change in scope increased the project budget from \$500,000 to \$750,000, as reported in the HVAC Project Summary Report presented to the Board on July 16, 2002.

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Record of Action of the Board of Supervisors

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**BOARD OF SUPERVISORS**  
**SAN BERNARDINO COUNTY MUSEUM HVAC SYSTEM REPLACEMENT – INCREASE**  
**APPROPRIATIONS, AWARD CONSTRUCTION CONTRACT AND AUTHORIZE FILING**  
**NOTICE OF COMPLETION**

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In the process of finalizing the design it has been further determined that the HVAC control system and the cooling towers should also be replaced. This added scope of work necessitates increasing the budget from \$750,000 to \$1,000,400. The energy efficiency of the new water-cooled rotary chillers along with other equipment improvements, is expected to provide a significant energy cost savings over the existing units and will meet the Museum's current cooling demands.

On December 17, 2002, the Board approved the plans and specifications and authorized Architecture & Engineering (A&E) to advertise for competitive bids. A&E advertised for competitive bids through its website, trade journals and the local newspaper. On January 6, 2003 a job walk was conducted with six prospective bidders in attendance. On January 29, 2003, three bids were received: D. Burke Mechanical Corporation for \$840,000; Los Angeles Air Conditioning of La Verne for \$885,410; and Arrowhead Mechanical of San Bernardino for \$971,600. D. Burke Mechanical Corporation was selected on the basis of submitting the lowest responsible bid.

This project is consistent with a County Administrative Office approved Capital Improvement Program request.

**REVIEW BY OTHERS:** This item has been coordinated with Eli Montoya, Department Contract Compliance Designee, on May 5, 2003; approved as to legal form by County Counsel (Jean-Rene Basle, Deputy County Counsel) on May 6, 2003; and reviewed by the County Museum (Laurie Rozko) on May 6, 2003, and the County Administrative Office (Lynn Chacon, Administrative Analyst) on May 6, 2003.

**FINANCIAL IMPACT:** This project was funded in the amount of \$300,000 (construction-\$240,000; contingencies-\$22,000; design/project management/inspection-\$38,000) in the FY 2001/02 Capital Improvement Program with expenditures of \$76,000 resulting in a carryover of \$224,000 to FY 2002/03. On May 13, 2003, the Board will consider the HVAC Project Summary Report that revises the estimated project cost to \$1,000,400. Project costs include construction (\$840,000), contingencies (\$44,000), and design/project management/inspection costs (\$116,400).

**COST REDUCTION REVIEW:** The County Administrative Office has reviewed this agenda item and concurs with the A&E and Facilities Management proposal and recommends this action since the current HVAC system cannot meet the present cooling demands due to the increased hours of operation.

**SUPERVISORIAL DISTRICT(S):** Third.

**PRESENTER:** G. Daniel Ojeda, Director, A&E, 387-5025  
Dave Gibson, Director, Facilities Management, 387-2240

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